Mental Health, Developmental Disabilities and Substance Abuse Related Admissions in Community Emergency Departments, Quarterly Report

Second Quarter, SFY 2007-08

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Appendix

The Report

This is the second report on patterns of behavioral health admissions within local emergency departments of North Carolina community hospitals in response to the General Statute 112C-147.1.1 Section 10.49(r). The report presents information for the second quarter of 2007-08, October to December, 2007.

The information presented has been collected through NC DETECT, a statewide epidemiological data collection system (see page 2 for detailed explanation of NC-DETECT). The document summarizes the utilization of community hospital emergency departments of the state by individuals with a behavioral health diagnosis (mental health and substance abuse). Consumers with developmental disabilities presenting at an emergency department during the quarter were fewer than 10 for almost all LMEs and this information has been suppressed for data confidentiality. The only exception to this is Wake LME where 11 developmental disability consumers were admitted to emergency departments during this quarter.

The information from NC DETECT is received by the Division of Mental Health, Developmental Disabilities and Substance Abuse Services through a data sharing agreement with the Division of Public Health. The data are provided to the Division of Mental Health as an aggregated file, providing the total number of admissions by disability status, age group and gender. The consumers that are represented in the report are those who had a behavioral health, ICD-9[1] code, indicating their diagnosis.

This report compares data where applicable to the previous two quarters of information. The data presented merely showcases the volume of individuals with a mental health or a substance abuse diagnosis seeking care from an emergency department of a community hospital. This report does not attempt to interpret or make conclusions on the data presented. The intent, explanation and potential limitation of each graph and chart, as applicable, is provided with the respective depiction. The Division encourages Local Management Entities to contact hospitals within their catchment area and build relationships at the local level to understand the data presented further and to develop mechanisms to address the issues related to access to services.

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[1] The **International Statistical Classification of Diseases and Related Health Problems** (most commonly known by the abbreviation **ICD**) provides codes to classify diseases and a wide variety of signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or disease. Every health condition can be assigned to a unique category and given a code, up to six characters long. Such categories can include a set of similar diseases.

2. Source of Information

The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT), is the early event detection system of the North Carolina Public Health Information Network. NC DETECT was created by the North Carolina Division of Public Health (NC DPH) in 2004 to address the need for early event detection and timely public health surveillance in North Carolina using a variety of secondary data sources. These secondary sources include information from local emergency departments, the Carolinas Poison Center, the Pre-hospital Medical Information System (PreMIS), and the NCSU College of Veterinary Medicine Laboratories (http://www.ncdetect.org/).

NC DETECT is developed and maintained by staff at the Department of Emergency Medicine at the University of North Carolina at Chapel Hill with funding by the NC DPH. The information presented in this report is based on data received by the NC DETECT system from emergency departments of community hospitals.

3. Emergency Department Admissions

The data presented below (Figure 1) show the total percentage of consumers who were admitted to a local emergency department with a behavioral health (mental health and substance abuse only) diagnosis. The percentage is calculated as a function of the total admissions for all causes to emergency departments (963,643 admissions) during the second quarter of SFY 2007-08. The total number of admissions for consumers with a mental health diagnosis during the second quarter of SFY 2007-08 was 79,007. During the same quarter 25,165 consumers were seen in emergency departments for a substance abuse related issue. The percentage of consumers in quarter two of SFY 2007-08 shows very little change from the past two quarter's admissions of 8.5% and 8.8% respectively for mental health and 3.0 and 3.1 % for substance abuse for QTR 4, 2006-07 and QTR 1 2007-08.

Figure 1. Mental Health and Substance Abuse Admissions in Local Emergency Departments by Disability, QTR 2, SFY 08
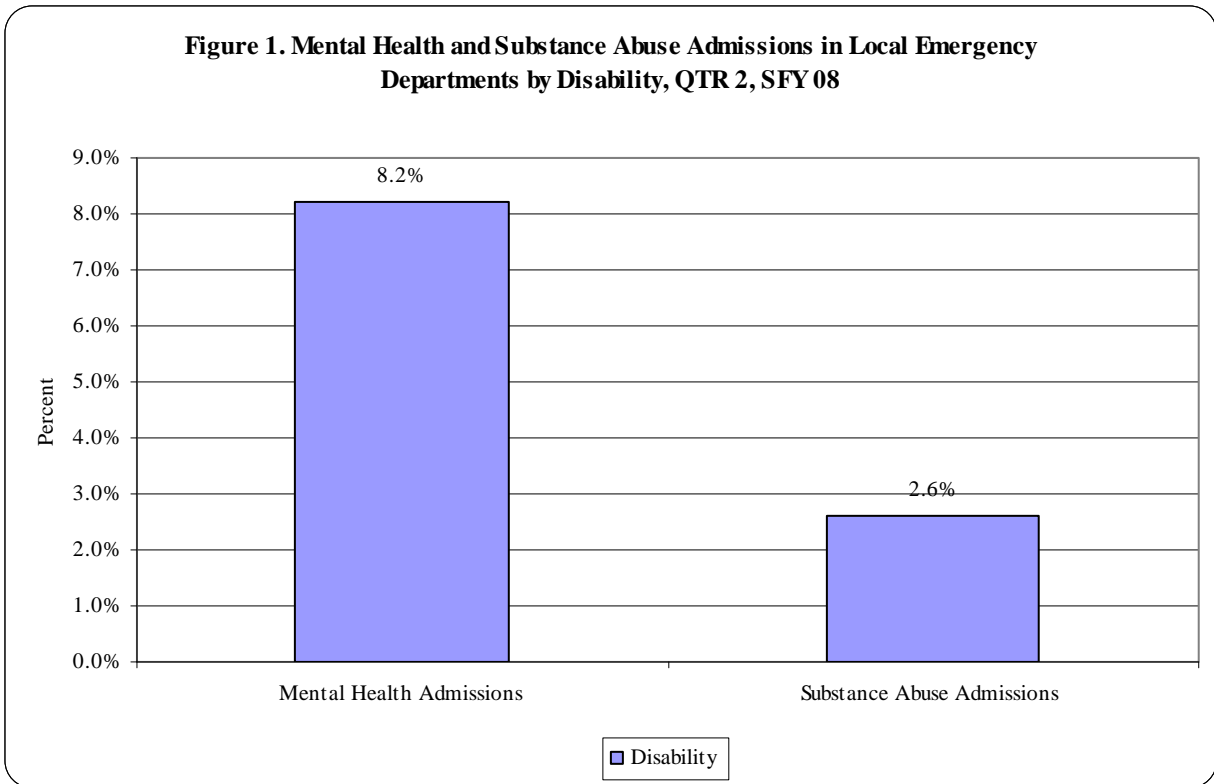
Source: NC DETECT QTR 2, SFY 2007-08

Figure 2, below, shows the percentage of admissions within local emergency departments disaggregated by age group and disability status. Data shows a higher representation of adults with a behavioral health diagnosis seeking care from the emergency departments compared to children and adolescents. The information is consistent with the data from QTR4 2006-07 and QTR 1, 2007-08.
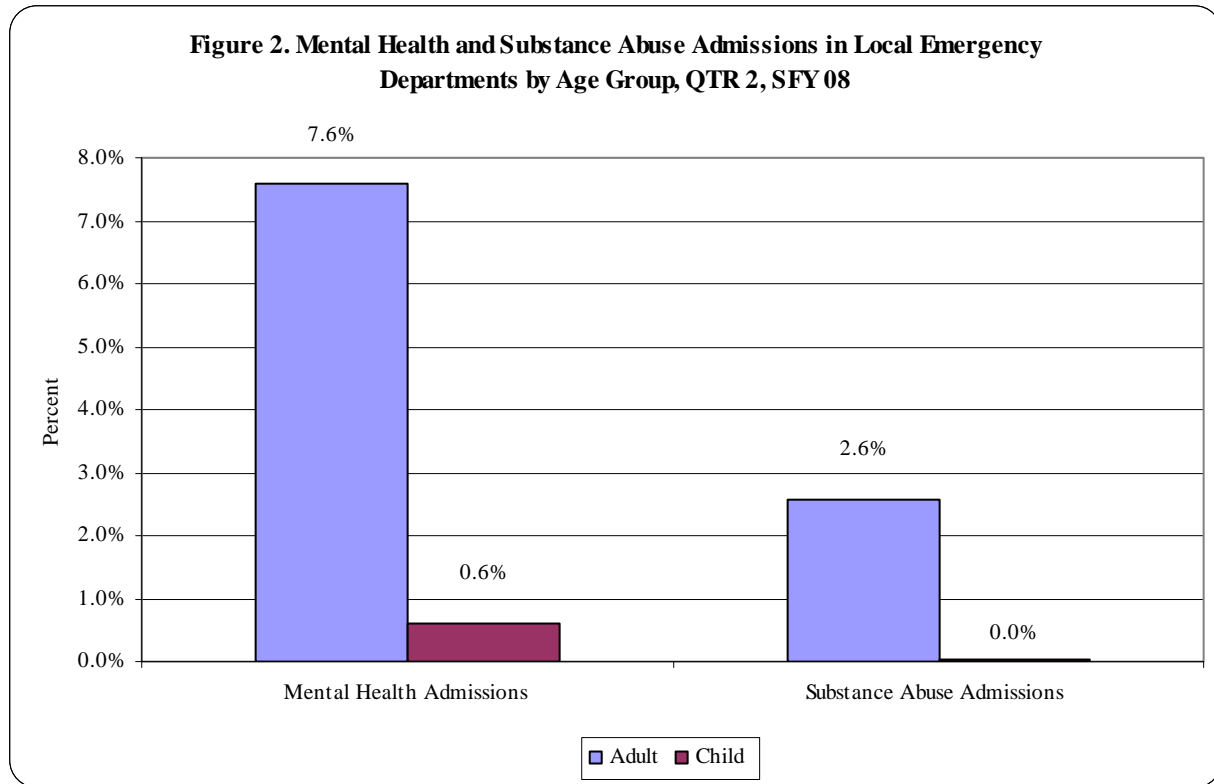
Figure 2. Mental Health and Substance Abuse Admissions in Local Emergency Departments by Age Group, QTR 2, SFY 08

Source: NC DETECT QTR 2, SFY 2007-08

Note. For the second quarter of 2007-08 there were 0 child (age ≤ 17 yrs) substance abuse admissions for the following LMEs: Albemarle, Beacon center, Burke-Catawba, Crossroads, Durham, Eastpointe, Five County, Foothills, Johnston, Onslow-Carteret and Southeastern Center

Figure 3 shows the distribution of males and females seeking mental health and substance abuse related care through local emergency departments. There were a higher number of females seeking care for mental health, whereas the percentage of men being admitted for substance abuse related issues were almost double that of women. This pattern of admissions is consistent with those seen in national emergency room admissions.

Figure 3. Mental Health and Substance Abuse Admissions in Local Emergency Departments by Gender, QTR 2, SFY 08
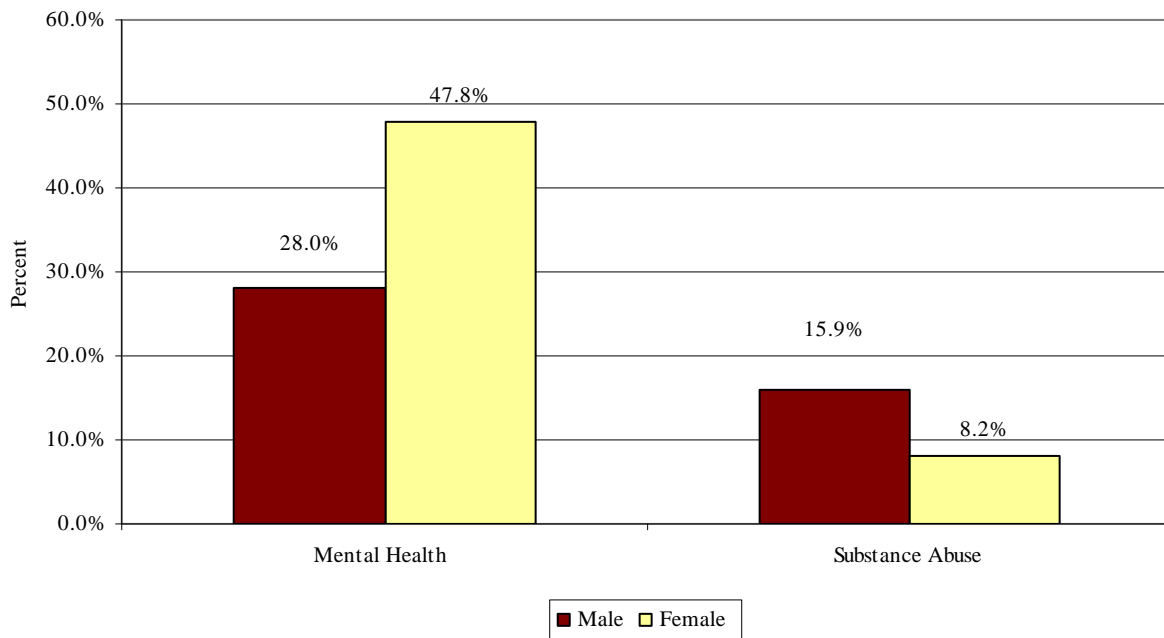
Source: NC DETECT QTR 2, SFY 2007-08

Table 1, shown below presents the counts and rates of admission for mental health and substance abuse related concerns during the second quarter of 2008. The rate allows for comparison of admissions across Local Management Entities (LME), which provides services to counties with varied population sizes. The statewide rate of admission per 10,000 population for mental health was 87.4 persons for the 2nd quarter, SFY 2008 and the statewide rate for substance abuse admissions was 27.8 persons. Consistent with the past two quarters of data, Western Highlands LME had one of the highest rates of mental health admissions (146.2 per 10,000) while Southeastern Regional (SER) had the highest rate of substance abuse related admission (36.9) for the quarter. Guilford had the lowest rate (55.5 per 10,000 population) for mental health admissions and Five County, and Foothills LMEs (22.3, 22.5 respectively per population) had the lowest rates for substance abuse admissions for the quarter.

| Table 1. Emergency Department Admissions by Local Management Entity, QTR 2, SFY 2007-08, October 1, 2007 to December 31 2007						
Local Management Entity	Mental Health (n)	Rate of MH Admissions/10,000 population	Substance Abuse (n)	Rate of SA Admissions/10,000 population	Developmental Disabilities (n)	Rate of DD Admissions/10,000 population
Statewide	**79007**	**87.4**	**25165**	**27.8**	*	*
ACR[+]	3114	121.2	762	29.7	*	*
Albemarle	1589	86.0	432	23.4	*	*
Beacon Center	1551	63.4	569	23.3	*	*
Burke-Catawaba	2606	107.4	671	27.6	*	*
CenterPoint	4704	110.7	1357	31.9	*	*
Crossroads	2669	101.8	541	20.6	*	*
Cumberland	2534	82.2	1134	36.8	*	*
Durham	1663	66.1	635	25.2	*	*
ECBH[+]	3290	83.7	1184	30.1	*	*
Eastpointe	3206	109.9	866	29.7	*	*
Five County	1685	73.0	515	22.3	*	*
Foothills	1486	92.4	362	22.5	*	*
Guilford	2536	55.5	1291	28.3	*	*
Johnston	1383	88.2	429	27.3	*	*
Mecklenburg	5538	64.6	2605	30.4	*	*
Onslow-Carteret	1427	62.6	594	26.1	*	*
Orange-Person-Chatham	1840	82.9	744	33.5	*	*
Pathways	4431	119.7	1084	29.3	*	*
Piedmont	6893	98.7	1868	26.8	*	*
Sandhills Center	4316	81.5	1405	26.5	*	*
Smoky Mountain	2818	79.5	960	27.1	*	*
Southeastern Center	2154	63.5	1085	32.0	*	*
Southeastern Regional	2570	100.5	945	36.9	*	*
Wake	5738	69.8	1699	20.7	11	0.13
Western Highlands	7266	146.2	1428	28.7	*	*

Source: NC DETECT, QTR 4, SFY 07

Note: Cells with counts below 10 have been suppressed to protect client confidentiality. The data presented does not include admission information on child substance abuse for Albemarle and Foothills LMEs.

[+]Abbreviations ACR- Alamance-Caswell-Rockingham; ECBH- East Carolina Behavioral Health

Figure 4 is a graphical presentation of the information presented in table 1, the rate of mental health and substance abuse admissions by Local Management Entities for the second quarter, SFY 2007 and first quarter, SFY 2008.
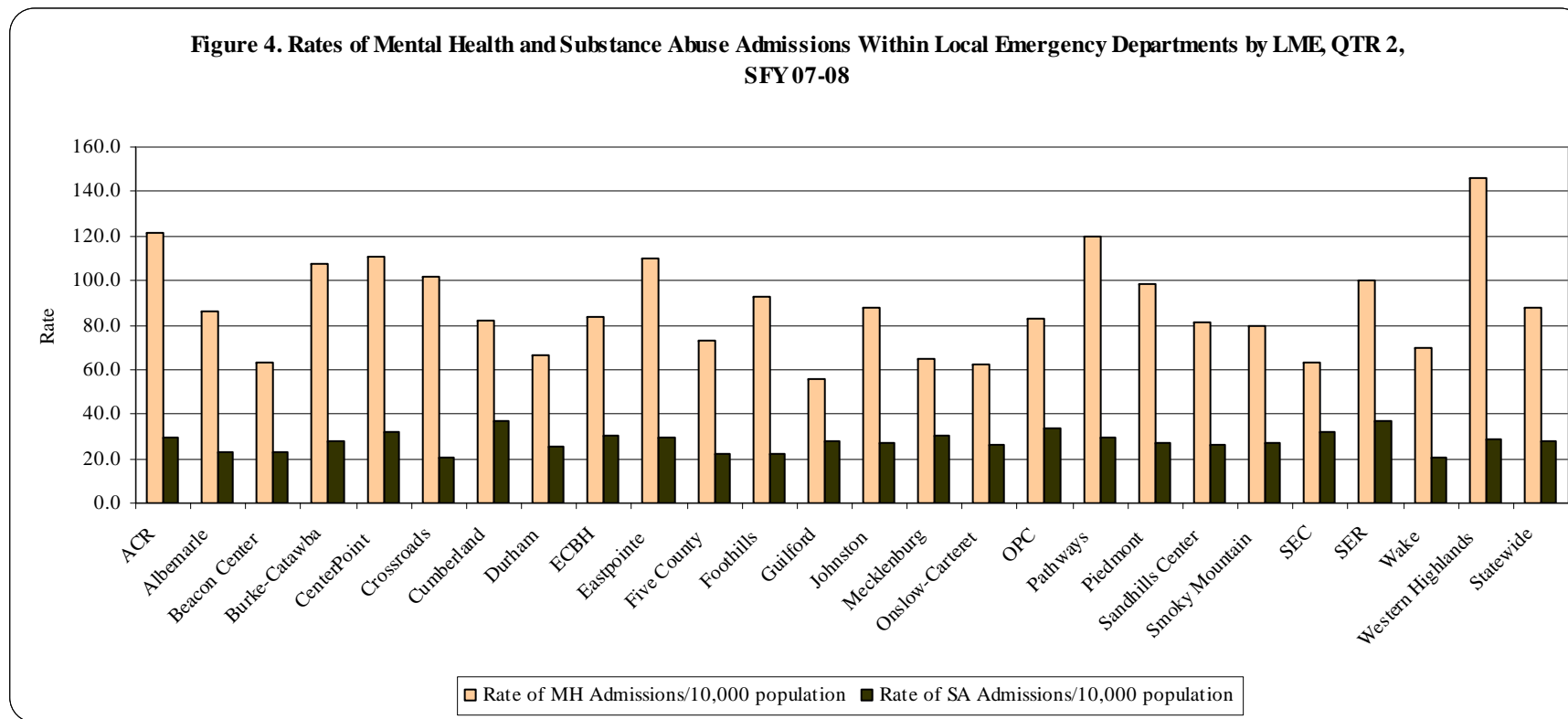
Figure 4. Rates of Mental Health and Substance Abuse Admissions Within Local Emergency Departments by LME, QTR 2, SFY 07-08

Source: NC DETECT QTR 2, SFY 2007-08

Note. For the second quarter of 2007-08 there were 0 child (age ≤ 17 yrs) substance abuse admissions for the following LMEs: Albemarle, Beacon center, Burke-Catawba, Crossroads, Durham, Eastpointe, Five County, Foothills, Johnston, Onslow-Carteret and Southeastern Center.

Abbreviations ACR- Alamance-Caswell-Rockingham; ECBH- East Carolina Behavioral Health, OPC-Orange -Person -Chatham, SEC- Southeastern Center, SER-Southeastern Regional

Table 2 presents the counts for mental health and substance abuse admissions disaggregated by age group (adult and child) for each of the 25 Local Management Entities.

Table 3. Emergency Department Admissions by Age Group and LME, QTR 2, SFY 2007-08, October 1, 2007 to December 31, 2007					
	Adult Mental Health Admissions (n)	Child Mental Health Admissions (n)	Adult Substance Abuse Admissions (n)	Child Substance Abuse Admissions (n)	Total ED Admissions (n)
Statewide	**73218**	**5789**	**24752**	**413**	**104172**
Alamance-Caswell-Rockingham	2895	219	749	13	3876
Albemarle	1442	147	432	0	2021
Beacon Center	1404	147	569	0	2120
Burke-Catawba	2404	202	671	0	3277
CenterPoint	4363	341	1330	27	6061
Crossroads	2532	137	541	0	3210
Cumberland	2235	299	1123	11	3668
Durham	1582	81	635	0	2298
East Carolina Behavioral Health	3021	269	1157	27	4474
Eastpointe	2976	230	866	0	4072
Five County	1584	101	515	0	2200
Foothills	1371	115	362	0	1848
Guilford	2383	153	1279	12	3827
Johnston	1260	123	429	0	1812
Mecklenburg	5235	303	2545	60	8143
Onslow-Carteret	1328	99	594	0	2021
Orange-Person-Chatham	1707	133	723	21	2584
Pathways	3977	454	1058	26	5515
Piedmont	6268	625	1810	58	8761
Sandhills	3995	321	1366	39	5721
Smoky Mountain	2672	146	943	17	3778
Southeastern Center	2068	86	1071	14	3239
Southeastern Regional	2341	229	945	0	3515
Wake	5294	444	1651	48	7448
Western Highlands	6881	385	1388	40	8694

Source: NC DETECT QTR 2, SFY 2007-08 Note. For the second quarter of 2007-08 there were 0 child (age $\leq$ 17 yrs) substance abuse admissions for the following LMEs: Albemarle, Beacon center, Burke-Catawba, Crossroads, Durham, Eastpointe, Five County, Foothills, Johnston, Onslow-Carteret and Southeastern Center.

APPENDIX

Appendix A. List of Hospitals Contributing Data to NC DETECT (January 31, 2008)

As of January 31, 2008, there are 109/112 (98%) hospitals submitting production-level data on a daily basis to NC DETECT.

Hospital	Hospital Location
Alamance	Burlington/Alamance
Albemarle	Elizabeth City/Pasquotank
Alleghany	Sparta/Alleghany
Angel	Franklin/Macon
Annie Penn	Reidsville/Rockingham
Anson	Wadesboro/Anson
Ashe	Jefferson/Ashe
Beaufort	Washington/Beaufort
Bertie	Windsor/Bertie
Betsy Johnson	Dunn/Harnett
Bladen	Elizabethtown/Bladen
Blowing Rock	Blowing Rock/Watauga
Blue Ridge Regional (Spruce Pine)	Spruce Pine/Mitchell
Brunswick	Supply/Brunswick
Caldwell	Lenoir/Caldwell
Charles A. Cannon	Linville/Avery
Cape Fear Valley	Fayetteville/Cumberland
Carteret	Morehead City/Carteret
Catawba Valley	Hickory/Catawba
Central Carolina	Sanford/Lee
Chatham	Siler City/Chatham
Chowan	Edenton/Chowan
Cleveland	Shelby/Cleveland
CMC	Charlotte/Mecklenburg
CMC Mercy	Charlotte/Mecklenburg
CMC Pineville	Charlotte/Mecklenburg
CMC Univ	Charlotte/Mecklenburg
Columbus	Whiteville/Columbus
Craven	New Bern/Craven
Davie	Mocksville/Davie
Davis	Statesville/Iredell
Dosher	Southport/Brunswick
Duke	Durham/Durham
Duke Raleigh	Raleigh/Wake
Duplin	Kenansville/Duplin
Durham Regional	Durham/Durham
FHS Montgomery	Troy/Montgomery
FHS Moore	Pinehurst/Moore
FHS Richmond	Rockingham/Richmond
Forsyth	Winston-Salem/Forsyth
Franklin	Louisburg/Franklin

Hospital	Hospital Location
Frye	Hickory/Catawba
Frye Alexander	Taylorsville/Alexander
Gaston	Gastonia/Gaston
Grace	Morganton/Burke
Granville	Oxford/Granville
Halifax	Roanoke Rapids/Halifax
Harris	Sylva/Jackson
Haywood	Clyde/Haywood
Heritage	Tarboro/Edgecombe
High Point	High Point/Guilford
Highlands	Highlands/Macon
Hoots	Yadkinville/Yadkin
Hugh Chatham	Elkin/Surry
Iredell	Statesville/Iredell
Johnston	Smithfield/Johnston
Kings Mountain	Kings Mountai/Cleveland
Lake Norman	Mooresville/Iredell
Lenoir	Kinston/Lenoir
Lexington	Lexington/Davidson
Lincoln	Lincolnton/Lincoln
Margaret Pardee	Hendersonville/Henderson
Maria Parham	Henderson/Vance
Martin	Williamston/Martin
McDowell	Marion/McDowell
Mission	Asheville/Buncombe
Morehead	Eden/Rockingham
Moses Cone	Greensboro/Guilford
Murphy	Murphy/Cherokee
Nash	Rocky Mount/Nash
NCBH	Winston-Salem/Forsyth
New Hanover	Wilmington/New Hanover
Northeast	Concord/Cabarrus
Northern Surry	Mt. Airy/Surry
Onslow	Jacksonville/Onslow
Our Community	Scotland Neck/Halifax
Outer Banks	Nags Head/Dare
Park Ridge	Fletcher/Henderson
Pender	Burgaw/Pender
Person	Roxboro/Person
Pitt	Greenville/Pitt
Presbyterian	Charlotte/Mecklenburg
Presbyterian Huntersville	Huntersville/Mecklenburg
Presbyterian Matthews	Matthews/Mecklenburg
Pungo	Belhaven/Beaufort

Hospital	Hospital Location
Randolph	Asheboro/Randolph
Rex	Raleigh/Wake
Roanoke Chowan	Ahoskie/Hertford
Rowan	Salisbury/Rowan
Rutherford	Rutherfordton/Rutherford
Sampson	Clinton/Sampson
Sandhills	Hamlet/Richmond
Scotland	Laurinburg/Scotland
Southeastern	Lumberton/Robeson
St Luke	Columbus/Polk
Stanly	Albemarle/Stanly
Stokes Reynolds	Danbury/Stokes
Swain	Bryson City/Swain
Thomasville	Thomasville/Davidson
Transylvania	Brevard/Transylvania
UNCH	Chapel Hill/Orange
Union	Monroe/Union
Valdese	Valdese/Burke
WakeMed Apex	Apex/Wake
WakeMed Cary	Cary/Wake
WakeMed North	Raleigh/Wake
WakeMed Raleigh	Raleigh/Wake
Washington	Plymouth/Washington
Watauga	Boone/Watauga
Wayne	Goldsboro/Wayne
Wesley Long	Greensboro/Guilford
Wilkes	North Wilkesboro/Wilkes